

# **ADVANCING HIGHER EDUCATION FOR FIRE SERVICE LEADERS**

## **EXECUTIVE LEADERSHIP**

BY: Martin Kemp, Battalion Chief  
Clovis Fire Department  
Clovis, California

An applied research project submitted to the National Fire Academy  
as part of the Executive Fire Officer Program

January 1999

## ABSTRACT

In an increasingly complex and demanding profession, the traditional “train from within” approach to educating future fire service leaders is no longer adequate. Too few departments require college education of their entry and officer level personnel. Tomorrow’s fire service leaders will need to be educated in a college setting to have the skills and knowledge necessary to cope with a changing work environment.

The purpose of this report was to examine the educational needs of fire service leaders, determine what levels of formal (college) education are most beneficial in meeting those needs, and examine what efforts fire departments are utilizing in improving the education of their personnel. This study employed both descriptive and evaluative research methodology. The research questions answered were:

1. Are fire departments finding it necessary to require higher levels of education for their current leaders?
2. What levels of higher education are most helpful in preparing future fire service leaders for their job responsibilities?
3. How are fire departments ensuring that their future leaders will have the necessary education?
4. What incentives are provided to encourage employees to improve their formal education?

A survey instrument was developed and sent to 102 fire departments in California, Oregon, and Washington in an attempt to determine the extent of their efforts in improving the college education of their personnel.

The research indicated that while many departments are aggressive in their efforts at promoting a college educated workforce, much more could be done.

The recommendations included (a) increase the educational requirement for entry level personnel to at least an associate’s degree, (b) require a bachelor’s degree at the Company Officer level, (c) require a master’s degree, or completion of the Executive Fire Officer Program at the National Fire

Academy for Chief Officers, and (d) improve educational incentive programs.

**TABLE OF CONTENTS**

	<b>Page</b>
ABSTRACT	2
TABLE OF CONTENTS	4
TABLE OF TABLES	5
TABLE OF FIGURES	6
INTRODUCTION	7
BACKGROUND AND SIGNIFICANCE	8
LITERATURE REVIEW	10
PROCEDURES	17
RESULTS	19
DISCUSSION	30
RECOMMENDATIONS	33
REFERENCES	36
APPENDIX	38

**TABLE OF TABLES**

<b>Table</b>	<b>Title</b>	<b>Page</b>
1	Number of Departments that Believe Higher Education is Necessary	20
2	Number of Departments with Personnel Enrolled or Graduated from EFOP	23
3	College Education as a Requirement for Entry Level	23
4	College Degree Required for Promotion	24
5	Number of Departments Providing Incentives for Education	27
6	Pay Incentives Commensurate with Degree	28

**TABLE OF FIGURES**

<b>Figure</b>	<b>Title</b>	<b>Page</b>
1	College Degree Necessary for Specific Fire Officer Ranks	21
2	Executive Fire Officer Necessary for Specific Fire Officer Ranks	22
3	College Degree Required for Specific Fire Officer Ranks	25
4	Executive Fire Officer Required for Specific Fire Officer Ranks	26
5	Amount of Tuition Reimbursement	28
6	Incentive Distribution	29
7	Incentive Combinations	30

## INTRODUCTION

The Fire Service and its role in service delivery to the public is changing. This change comes from both within the communities that are served by fire departments and from outside, through direct competition with private enterprise. The necessity to be “competitive” in the quest for often dwindling public financial resources and the ever increasing costs of providing services requires dynamic, proactive leadership. Leadership in the face of these challenges will require a better educated core of employees. It is not likely, nor is it necessary to eliminate the normal fire service practice of promoting from within. However, the current and future employees who will become the leaders of tomorrow must improve their education beyond the classroom of experience.

The Fire Service as a profession must demand that new employees have at least a two year college degree prior to employment, and the members of the officer ranks, from Company Officer to Chief of Department must have at least a four year college degree, and in many cases, post graduate education or degrees as well. This level of education should become the norm in the future, enabling fire service leaders to work on a equal professional footing with business, government and community leaders in their towns and cities.

Entry level requirements have typically treated the fire service as more of a craft than a profession, with this trend extended to promotions through the practice of requiring only time in grade as a prerequisite for eligibility for promotional examinations. Departments which do not require college education at the entry level or as prerequisites for promotions, find it difficult for their employees to catch up academically while coping with problems and issues that could be managed more effectively by a better educated work force. Many fire departments have found it necessary to provide financial incentives to encourage their personnel to improve their education. These efforts have had a significant impact on raising the educational level of many fire fighters and fire officers. These inducements, however, do not necessarily ensure that those individuals who eventually become the leaders in their organizations are educated to the level necessary for the demands placed upon them.

The purpose of this report is to examine the educational needs of Fire Service leaders, determine what levels of formal (college) education is most beneficial in meeting those needs, and examine what

efforts fire departments are employing in improving the education of their personnel. This study employed both descriptive and evaluative research methodology through the use of an extensive literature review and survey instrument, which examined the college educational needs of the fire service and the efforts that many fire departments are employing to meet those needs.

The research questions answered in this study were:

1. Are fire departments finding it necessary to require higher levels of education for their current leaders?
2. What levels of higher education are most helpful in preparing future fire service leaders for their job responsibilities?
3. How are fire departments ensuring that their future leaders will have the necessary education?
4. What incentives are provided to encourage employees to improve their formal education?

## **BACKGROUND AND SIGNIFICANCE**

The role of the modern fire service manager is changing. Service expansion into Emergency Medical Services, Hazardous Materials Mitigation, and Disaster Preparedness, while still continuing to meet the community's needs for fire protection and prevention, requires fire service leaders to compete for dwindling financial resources while maintaining a high degree of readiness and customer service. The ability to promote and advance the mission of the fire service in this environment will require better educated leaders. "Fire and emergency services managers of the future must be prepared to discuss issues, on an equal academic footing, with architects, engineers, city managers, and health care professionals" (IAFC Foundation, 1996).

In this day and age when college education has become commonplace, to employ and retain a firefighter or fire officer who is educationally inferior to the citizens they protect and for that matter those in government... appears to be impractical.

As a practical matter, the firefighter or fire officer must be at least as well educated



as the people with whom they live and work (Harper, 1997).

Ensuring better educated firefighters, company officers, and chiefs, is essential for fire agencies now, and in the future. There are numerous approaches to help in educating personnel for these future challenges. From new entry and promotional level requirements, to financial incentives for completing higher levels of education, fire service leaders have the tools necessary to prepare their employees for the future.

The Clovis Fire Department is a career organization of 47 sworn personnel protecting a growing community of slightly over 68,000 residents. The city is a predominately residential community with a mix of light industrial and retail commercial occupancies. The department responds to slightly over 4,200 incidents of all types per year from three fire stations. Construction on a fourth station will begin soon. The current personnel distribution consists of fifteen firefighters, twelve engineers, twelve captains, three battalion chiefs, and the chief of department. In addition, a fire captain and engineer are currently assigned to the Fire Prevention Division and a fire engineer and battalion chief are assigned to the Training Division. Nine additional personnel will be hired over the next year to staff the new station while personnel currently within the organization will be promoted for new engineer and captain's positions created by the addition of the new station.

Current educational requirements for new hires are limited to a high school diploma with certification to firefighter I and emergency medical technician I. Beginning in April of 1999, individuals promoted to the rank of fire captain must have a two-year college (associate's) degree. Beginning in July of 2006, individuals promoted to the rank of chief officer must have a four-year (bachelor's) degree and Chief Officer Certification (City of Clovis, 1998).

Current educational incentives consist of salary increases and tuition reimbursement. Personnel are awarded a 2.5% increase in their base salary once they have completed 30 units of college course work in Fire Science. An additional 2.5% increase can be obtained upon successful completion of an associate's or bachelor's degree. In addition, employees who wish to pursue a bachelor's degree or State/National Fire Service certifications (i.e. Fire Officer, Chief Officer, Executive Fire Officer) are eligible for reimbursement for the costs of tuition and books.

There is currently no additional incentive to pursue advanced college degrees beyond the baccalaureate level (City of Clovis, 1997).

On the surface, it appears that department education requirements for promotion as well as the financial incentives provided are sufficient to ensure that future leaders of the Clovis Fire Department will be well educated. However, as currently employed, these conditions may serve to discourage education outside of a fire science discipline, particularly as it relates to the initial 2.5% incentive. In addition, if a bachelor's degree is obtained outside of a fire science curriculum, a maximum of 2.5% is all that can be obtained, without returning to school for the additional 30 units of course work in fire science (City of Clovis, 1997). This is especially troublesome in light of the changing roles of fire service executives, and the small percentage of time (perhaps as little as 10%) devoted to emergency response, for which a fire science education is most beneficial (Smoke, 1998).

The course, Executive Leadership, at the National Fire Academy contains a unit titled: *Managing Change*. This unit posits that change, rather than stability is now the norm, and that the effective fire service executive must be able to see the need for change, the risks involved in dealing with change, and the opportunity that change provides (NFA, 1996). Seeking to change the traditional approach to educating fire service leaders (through training and experience alone) towards a workforce with a more in-depth, well-rounded college education provides the foundation for this research report.

## **LITERATURE REVIEW**

A review of literature was conducted to examine the changing job roles of fire service leaders and whether these new roles are creating a need for better educated personnel, which levels of higher education might be most useful, how fire departments are ensuring that their future leaders will have the necessary education, and what incentives are most useful in encouraging employees to improve their education. This review provides the basis for understanding the new, more demanding roles of fire service leaders, and the necessity of a highly educated workforce in meeting the management and leadership challenges of these new roles.

### **CHANGING ROLES AND THE NEED FOR HIGHER EDUCATION**

Increasing demands to provide more services, such as Emergency Medical Care, Hazardous Materials Response and Mitigation, and Disaster Preparedness, while at the same time reducing costs, and in some cases, having to compete with private providers of these same services, have challenged fire service leaders in their approach to meeting these demands. Chris Geiger writes: “the competitive nature of business and the threat of future privatization will create new and real challenges for tomorrow’s fire officers” (Geiger, 1997). Being prepared and equipped to advance the needs of the organization in such a complex and competitive environment requires additional skills not readily derived through the traditional fire service experience of emergency response. Burton Clark points out that this was recognized in the Wingspread Conference of Fire Service Leaders as early as 1966 when they concluded that educational needs for the fire service should be based on the following skills: a) mastery of the scientific method, b) understanding human relations, and c) effective communication and organizational skills. (Clark, 1993).

The ability to accomplish the departments’ goals requires the support and cooperation of elected and other government officials, as well as the support of the public. The lack of an advanced education can hamper fire officials in the achievement of these goals as pointed out by Brame, Lewis, et al, in their interview with the former Fire Chief and now City Manager of Anaheim, California, Bob Simpson;

It is my opinion that the fire service’s obsession with training officers in the traditional firefighting skills and not training high-level fire service managers for administration has weakened the fire service to the point where, in many cases, fire administrators are incapable of dealing with professional managers in government, industry... (Brame, Lewis, et al, 1990).

The authors go on to state:

Competition within the public sector for scarce tax dollars can only be expected to become more intense in the future. Tomorrow’s successful chiefs will have to deal with highly educated elected public officials and city managers. Comparable education is a major step toward being perceived as a peer and as a professional administrator (Brame, Lewis, et al, 1990).

Dan Whisler's research into company officer development revealed that future fire service leaders must have improved skills and education in areas where they spend the bulk of their time, such as administration, personnel management, reporting, and fire prevention (Whisler, 1994). This is echoed by Clinton Smoke, when he states "most of the requirements listed in the *Standard on Fire Officer Professional Qualifications* focus on administration, management and supervisory issues, and company officers spend about 90 percent of their time dealing with these issues" (Smoke, 1998). Otis Latin lists the following skills and education as necessary to maintaining productivity in the fire service; "... trend analysis, statistics, marketing, budgeting, planning, written communications, and public speaking." (Latin, 1992). Many characteristics of good fire officers are developed through higher education (Geiger, 1997). While the need for a college education is well established through research and practice as indicated above, further examination is required to determine the most appropriate level of college education for the different positions, or ranks, within the fire service.

#### THE LEVELS OF HIGHER EDUCATION

Formal, higher education is commonly thought to include two year associate degrees, four year baccalaureate degrees, and graduate programs at the master's and doctorate levels. Research by Richard Hollas found that in order for fire service professionals to be able to compete in the "...highly educated world of public administrators..." that they must enhance their level of education to that of similar employees in other areas of the public sector (Hollas, 1994). This is reinforced by information cited by C.R. Bennet who found that a presidential commission in 1967 had recommended that educational standards for law enforcement officers should require a degree at the baccalaureate level "...as a minimum standard for employment" (Bennet, 1994).

In addition to being able to compete with their peers in the public sector, fire service leaders must also be able to manage in the information age as well, as indicated by Michael Ward: "It's critical that Generation Y firefighters develop and maintain the ability to read and write at the college level, because the bachelor's degree is replacing the high school diploma as the minimum needed to function in the information age" (Ward, 1998).

Different levels of college, or higher education, are routinely cited throughout the literature for

positions of leadership within the fire service.

As firefighters aspire to higher positions, and seek promotions, the need for education becomes increasingly important. An associate degree is required for many positions as fire chief and is recommended for all. For intermediate to large cities, a bachelor's degree often is required and always recommended. For departments in very large cities, a master's degree is recommended and soon may be required... (Kramer, 1995).

This position is also reflected in recommendations in Dan Whisler's research on company officer development where he indicates that college level courses should be incorporated into such programs. He also recommends that Battalion and Division Chief officers should be required to complete an associate's degree, while Chief's of Departments should be required to complete a bachelor's degree (Whisler, 1994). Survey results reported by Brent Harper indicated: "The majority of fire chiefs would still like to see new recruits with a two-year degree... they are almost unanimous in their desire to see fire officers and fire prevention personnel with at least a two-year degree" (Harper, 1997).

Surveys conducted for similar research into higher education for firefighters and fire officers revealed various levels of college education requirements which are reflected by the focus of the research, and the size of the respondent's departments. Hollas reported that only 13% of respondents to questions posed regarding college education requirements indicated that such an education was a precondition for employment, while 28% indicated that higher levels of education were required for promotion (Hollas, 1994). Latin reported results from similar surveys which indicated that 27% of respondents "...have a prerequisite of some college hours or a degree as a requirement for some of their promotional examinations or appointments" (Latin, 1992). Whisler surveyed members of several executive fire officer classes while in attendance at the National Fire Academy. Results from this survey indicated that 63% of respondents felt that an associate's degree should be a requirement for promotion to an officer's position, while 15% indicated that a bachelor's degree was necessary, and 21% indicated that no college degree was necessary for promotion to fire officer (Whisler, 1994). Leslie Albert recommended progressive levels of college education based on an individual's position within

their department. This recommendation was based on survey results which indicated a requirement of fifteen college semester hours for entry level firefighters, an associates degree for staff officers, and a bachelor's degree for the fire chief (Albert, 1997).

Additional literature was reviewed in an attempt to determine if college degrees in fire science or fire administration are adequate for the needs of the future fire service leader, or whether higher levels of education in other disciplines might better serve these individuals. Dr. Larry Ritcey, in a lecture given at the National Fire Academy, indicated that fire science degrees are not appropriate, "...the focus is too narrow, and the business isn't. The business [fire service] is changing, you're not in suppression anymore" L. Ritcey (lecture, September 22, 1998). In the book; *Recreating the Fire Service*, William Hewitt believes that the development of fire service officers through traditional educational opportunities that have focused only on the fire service has been misguided. He indicates that this has hampered fire service leaders in their efforts to keep pace with those in private enterprise. This isolation has prevented them from being exposed to a more diversified range of leadership and management innovations (Hewitt, 1995). Fire service related graduate degrees may be too narrowly focused as well, according to William Kramer. He indicates:

...once students... are seeking a master's-level education, they will no longer be fire practitioners. Rather, they are going to be managers and will not need additional fire knowledge, but will need additional business and administrative skills such as those taught in MBA (master of business administration) or MPA (master of public administration) programs (Kramer, 1995).

It is interesting to note that there is a similar feeling regarding too much specialized training in one's chosen field outside of the fire service as well. Writing in *Beyond Reengineering*, Michael Hammer states:

If you aspire to a career in the business world, avoid an undergraduate major in business at all costs. You may learn some superficially useful skills, but not the fundamental capabilities needed for the long haul. The great contemporary

hazard to real education is premature specialization. There is no better preparation for our technological age than a classical education: by absorbing and confronting the thinking of history's greatest minds, we learn to think for ourselves.

(Hammer, 1996).

### ENSURING WELL EDUCATED FUTURE FIRE SERVICE LEADERS

It appears that the most prevalent practice for ensuring that future fire service leaders will hold college degrees arises from requirements which impose such an education on either entry level or promotional positions. This practice was either used or recommended in much of the literature which was examined. Otis Latin believes that fire departments must begin to require a college education for entry and promotional positions as well (Latin, 1992). The Aurora, Colorado Fire Department has already begun to require some college level education for its recruits and company officers, and will impose a bachelor's degree requirement for chief officers by 1999 (Bennett, 1994). Fort Hartsfield recommends in his research on the relationship of higher education to fire service leadership that a simple preference for college level education among fire officers should be replaced with such an educational requirement being made a condition of employment instead (Hartsfield, 1993). Including a formal college education as an integral part of fire officer certification is recommended by William Crapo. He writes: "...college level education in the form of associate and bachelor degrees should become mandatory for all officers. Experience and education make an unbeatable combination." (Crapo, 1998).

While certainly not all firefighters aspire to become company or chief officers, those that do in departments with college education requirements are aware of what it will take to become eligible for such positions. In addition, those individuals who wish to compete for chief of department positions often find such requirements listed as minimal qualifications, with the addition of completion of the Executive Fire Officer Program of the National Fire Academy becoming increasingly included as well (Paulsgrove, 1997).

### EDUCATIONAL INCENTIVES

While requiring college degrees, particularly as a condition for advancement can be considered as

an incentive in and of itself, there are other factors which can help to motivate prospective fire service leaders in improving their education. Such incentives are often provided in the form of tuition reimbursement or incentive pay increases for college credit or degrees. Each of these types of financial stimuli are employed by the Farmington, New Mexico Fire Department for their personnel (Whisler, 1994). These kinds of incentives may provide help in defraying the cost of obtaining a college education but do not replace an individual's personal motivation to obtain either the education or the promotion. Clinton Smoke in his article; Career development for company officers, in *The Voice* indicates: "Training to maintain essential skills should be provided as part of an employee's job. However, training that helps one get ready for advancement should require some initiative on the part of the employee" (Smoke, 1997). Chris Geiger, writing in *American Fire Journal* believes that a department's financial support to encourage higher education is an investment... "financially supporting and encouraging a firefighter's educational pursuits shouldn't be considered an expenditure or a fringe benefit, but, rather, an investment in the future of the fire service" (Geiger, 1997).

## SUMMARY

The need for a college level education to prepare future fire service leaders is well established. Recognized as early as 1966 in the first *Wingspread Conference*, this was reinforced in findings reported from *Wingspred IV*, in 1996. "Mid to senior level fire and emergency services managers must have college experience if recognition of their professional status is going to be maintained" (IAFC Foundation, 1996). By requiring college level education as either a condition for entry level positions or as a prerequisite for promotion, many departments have assisted their future leaders in obtaining the skills necessary to manage their complex and varied responsibilities. Financial inducements coupled with an individual's strong desire to grow and advance can help ensure that there will be enough qualified and capable individuals to continue to lead the fire service into the next millennium.

## **PROCEDURES**

The literature review was conducted at the Learning Resource Center at the National Fire



Academy and from the author's personal collection. This review included a total of seven other applied research projects from the Executive Fire Officer Program that were examined for comparison and background to the experience and procedures used to promote and encourage higher education within the Clovis Fire Department.

The literature review explored the changing role of the fire service executive and the ability of these executives to keep pace with the demands inherent within these changing roles. This review also provided insight into the wide variety of approaches for promoting the achievement of higher levels of education among members of the fire service.

The literature review provides the basis for understanding the need for higher education and gives some information for comparison with other department's approaches to improving this education. While this information was important in determining how to address this problem within the Clovis Fire Department, it was also important to determine if other departments of a similar size and growth potential saw this as a problem and if so, what actions they were taking to correct it.

A survey instrument was developed for determining the specific actions other departments are using to ensure that their future leaders will have the educational foundation they need to be effective. The survey covered four general areas of interest; a) the need for higher levels of education, and what specific degrees might be appropriate for leadership ranks within each department, b) whether some college education is required for entry or promotion and if so, what levels of education are required, c) whether incentives for obtaining a college education is provided and if so, what types are provided and, d) if departments have personnel enrolled or graduated from the Executive Fire Officer Program at the National Fire Academy and whether this is a requirement for any position within their department (see appendix for a copy of the survey). The data derived from these surveys provides a picture of the higher education promotion efforts of departments in California, Oregon and Washington, and illustrates how these efforts compare with the recommendations cited in the literature.

### LIMITATIONS

A total of 102 departments throughout the states of California, Oregon and Washington were surveyed. The departments were chosen to reflect the demographics of departments with a range of 50-

200 career personnel and populations served from 30,000 to 200,000 residents. This represents a current and future projected range similar to that which exists in Clovis. Previous research cited above which most closely resembles the survey instrument used in this report was limited to metro-sized departments of over 500,000 population. The limited demographic and geographic focus of the survey used in the research for this report, as well as the relatively small sample size (71 of 102 departments queried responded to the survey), yields a somewhat narrowly defined result, therefore, the information illustrated here should not be considered indicative of the higher education improvement efforts of fire departments in general.

#### DEFINITION OF TERMS

Associate's Degree: A two-year college degree, generally obtained through a junior or local community college.

Bachelor's Degree: A four-year degree, generally obtained through public or private state colleges and universities.

Executive Fire Officer: Those individuals who have been accepted into or have completed the National Fire Academy's Executive Fire Officer Program. These individuals are most often chief level officers, or occasionally those of lower ranks with equivalent responsibilities. Participants in this program must also possess at least an associate's degree.

Executive Fire Officer Program: A major educational effort of the National Fire Academy to enhance the management and leadership capabilities of fire officers. This four-year program consists of three core, and one elective course provided at the NFA campus in Emmitsburg, MD. Each two-week course is followed by an applied research project which must be completed within six months of the end of each course.

Higher Education: Any education received after the completion of high school for which college credit is awarded from an accredited college or university.

Master's Degree: Generally a two-year degree obtained after successful completion of a bachelor's degree.

National Fire Academy: A division of the United States Fire Administration (USFA) of the Federal

Emergency Management Agency (FEMA), the National Fire Academy provides training and educational opportunities to the nation's fire service through a variety of on-campus and out reach programs.

## RESULTS

The results were derived by tabulating the responses to eight specific questions. These responses were then grouped and tabulated for application to the research questions.

### 1. Are fire departments finding it necessary to require higher levels of education for their current leaders?

One general question was asked regarding whether the respondents believed that higher (college) education is necessary for Company Officers and above. Of the 71 departments who responded to the survey, 91% indicated that they believe that higher education is necessary for Company Officer positions and above. See Table 1, Number of Departments that Believe Higher Education is Necessary.

Table 1.

#### Number of Departments that Believe Higher Education is Necessary

<u>Survey Question</u>	<u>Yes</u>	<u>No</u>	<u>%Yes</u>
1. Do you believe that higher (college) education is necessary for Company Officer and above?	64	7	91

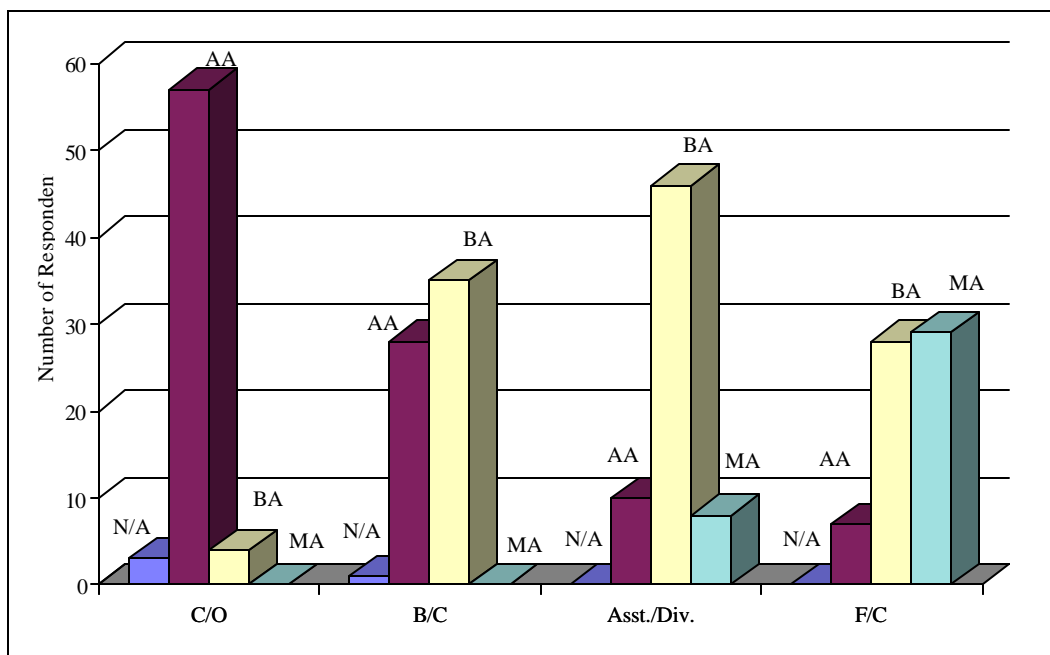
### 2. What levels of higher education are most helpful in preparing future fire service leaders for their job responsibilities?

A total of two questions were asked in the survey regarding what levels of college education are most helpful in preparing future fire service leaders for their job responsibilities. Those surveyed were first asked to identify what level of education, associate's (AA), bachelor's (BA), master's degree (MA), and/or Executive Fire Officer (EFO) they believed was necessary for each of four rank classifications, Company Officer (C/O), Battalion Chief (B/C), Assistant, Division, or Deputy Chief

(Asst./Div.), and Chief of Department (F/C). Results for responses related to the need for completion of the Executive Fire Officer Program are reported for all ranks from Company Officer through Chief of Department and illustrated separately.

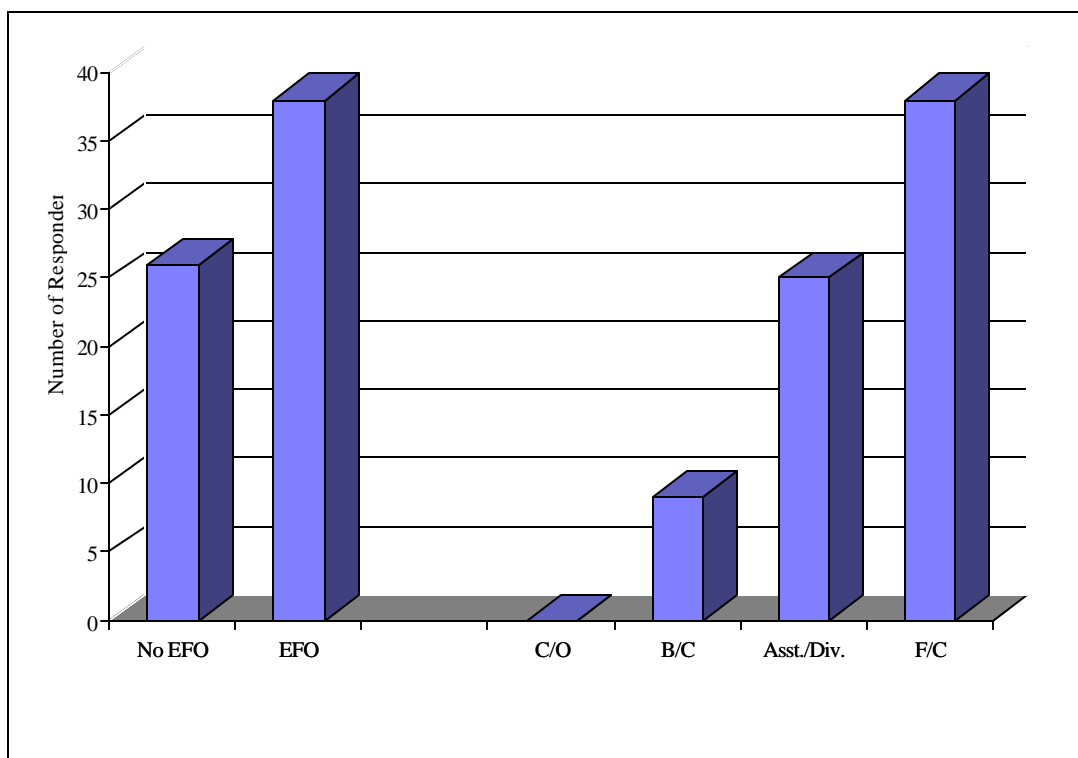
At the Company Officer level, the vast majority of respondents (57 of 64) indicated that an associate's degree was necessary while only four indicated that a bachelor's degree was. None of the respondents indicated that a master's degree was necessary, and three respondents did not answer (N/A). At the Battalion Chief level, 28 of the respondents favored an associate's while 35 indicated bachelor's degree as the education necessary for this position. No one indicated that a master's degree was needed at this rank, and one did not answer. Survey results at the Assistant, Division, or Deputy Chief level indicated that ten of the departments believed an associate's degree was necessary, while most (46) believed that a bachelor's degree was necessary at this position. A small number, only eight, of the respondents believed that a master's degree was necessary. At the highest rank level, Chief of Department, seven of the respondents indicated that an associate's degree was necessary, while the remaining departments were nearly evenly split between the necessity for a bachelor's degree (28) or a master's degree (29). Figure 1, College Degree Necessary for Specific Fire Officer Ranks illustrates the responses for each rank and educational level.

Figure 1.

College Degree Necessary for Specific Fire Officer Ranks

Of the 64 respondents that indicated that higher education was necessary at Company Officer and above, 38 indicated that completion of the Executive Fire Officer Program (EFOP) of the National Fire Academy was necessary at a variety of ranks. The survey results reflected an increasingly greater importance placed on completion of EFOP as an individual rises through the ranks. At the level of Battalion Chief, nine indicated that EFOP was needed, 25 believed it necessary for the positions of Assistant, Division, or Deputy Chief, and all 38 indicated that completion of this program was necessary for a Chief of Department. No one believed Executive Fire Officer to be necessary at the Company Officer level. Figure 2, Executive Fire Officer Necessary for Specific Fire Officer Ranks summarizes this data.

Figure 2.

Executive Fire Officer Necessary for Specific Fire Officer Ranks

Each department surveyed was also asked to indicate if they had any personnel currently enrolled in, or graduated from the National Fire Academy's Executive Fire Officer Program (EFOP). Of the total number of departments responding, nearly half indicated that they had personnel who were either enrolled in, or had completed this program. See Table 2, Number of Departments with Personnel Enrolled or Graduated from EFOP for an illustration of these results.

Table 2.

Number of Departments with Personnel Enrolled or Graduated from EFOP

<u>Survey Question</u>	<u>Yes</u>	<u>No</u>	<u>% Yes</u>
7. Do you have personnel currently enrolled or graduated from the National Fire Academy's Executive Fire Officer Program?	34	37	48

Among the thirty-four departments with personnel in EFOP, there were thirty-five individuals currently enrolled and seventy-two graduates of the program.

3. How are fire departments ensuring that their future leaders will have the necessary education?

Three of the questions in the survey were directed at answering this research question. Those surveyed were first asked if their department required some college education for entry level positions, and if so, they were asked to indicate the number of college hours or degree required. One fifth of the respondents indicated that they required college education for their entry level positions. See Table 3, College Education as a Requirement for Entry Level.

Table 3.

College Education as a Requirement for Entry Level

<u>Survey Question</u>		<u>Yes</u>	<u>No</u>	<u>% Yes</u>
3. Is some college education required for entry level positions with your department?	14	57	20	

Of the small number of departments (14 of 71) that indicated that they did require some college education for their entry level positions, three indicated that they required an associate's degree, while the remainder required a variety of hours of college credit less than an associate's degree.

The departments surveyed were then asked if they required a college degree for promotion, and if

so, to indicate the degree required and the rank or position for which it is required. Of the 71 departments responding to the survey, 29 (41%) said they required a degree for promotion. Table 4, College Degree Required for Promotion summarizes these responses.

Table 4.

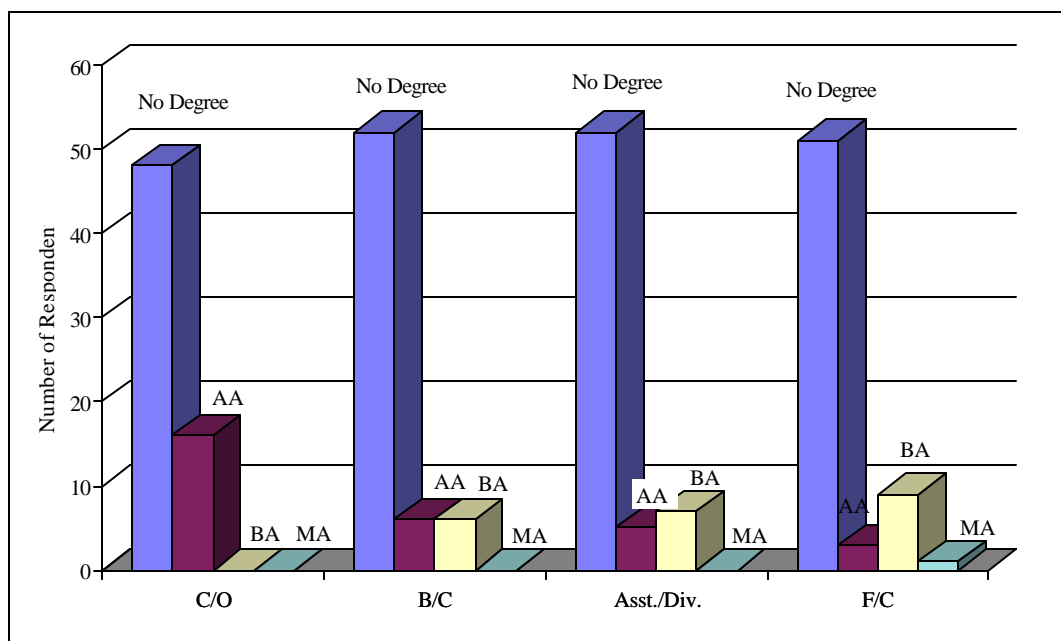
College Degree Required for Promotion

<u>Survey Question</u>	<u>Yes</u>	<u>No</u>	<u>% Yes</u>
4. Is a college degree required for promotion?	29	42	41

Those departments that stated that they required a college degree for promotion were also asked to indicate what level of education they require for the positions of Company Officer, Battalion Chief, Assistant, Division or Deputy Chief, and Chief of Department. Slightly more than one quarter of the respondents indicated that they required Company Officers within their departments to have an associate's degree. The remaining departments did not require a college degree of any kind at this level. At the Battalion Chief's rank, slightly less than one tenth of the departments indicated that these individuals must have an associate's degree, while an additional one-tenth required a bachelor's degree. None of the departments indicated that they required a master's degree for this position. For Assistant, Division or Deputy Chief's, one twelfth of the respondents required an associate's degree, slightly more than one tenth required a bachelor's degree, and none indicated a master's degree as a requirement. For the rank of Chief of Department, one twentieth of the respondents indicated that an associate's degree was required while more than one seventh indicated that a bachelor's degree was required and one department indicated that a master's was required. Figure 3, College Degree Required for Specific Fire Officer Ranks, summarizes these results.

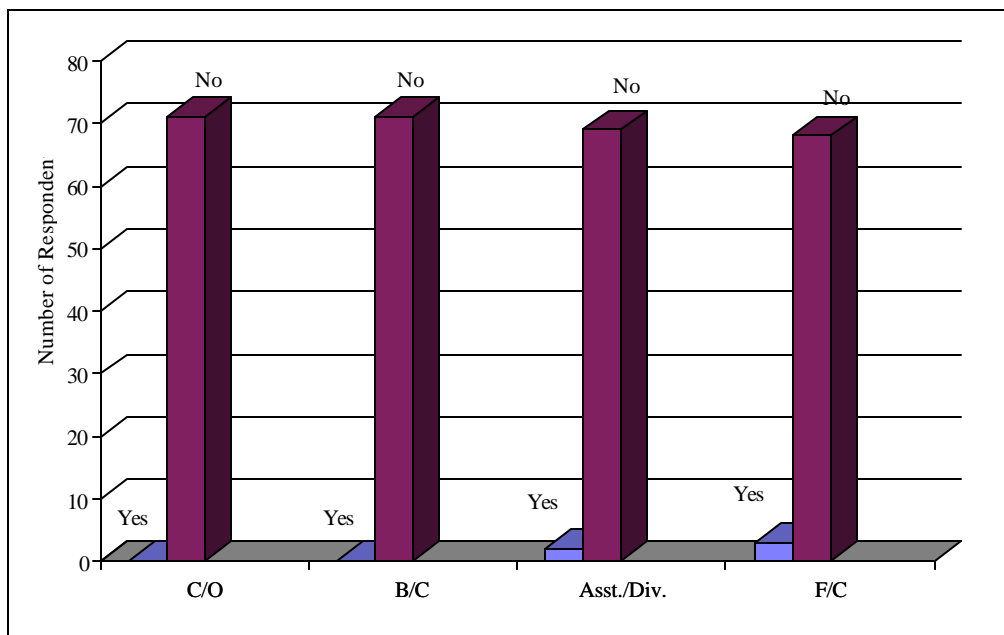


Figure 3.

College Degree Required for Specific Fire Officer Ranks

Each department was also asked to indicate if they had any positions within their department which required graduation from the Executive Fire Officer Program, and if so, to identify the position where this was required. Less than one tenth of the respondents indicated that they had any positions which required completion of the Executive Fire Officer Program. Of the five departments which indicated that they required EFOP graduation for positions within their departments, two indicated that this education was required at the Division Chief level and three respondents indicated that it was required for Chief of Department. See Figure 4, Executive Fire Officer Required for Specific Fire Officer Ranks for an illustration of these results.

Figure 4.

Executive Fire Officer Required for Specific Fire Officer Ranks

A direct comparison by rank for the educational level deemed necessary and the education actually required was also examined. While 89% of the respondents believe that an associate's degree is necessary at the Company Officer level, only 26% require it. At the Battalion Chief level, 44 and 55% respectively, believe that an associate's or bachelor's degree is necessary while in practice, only nine percent of the departments require either degree at this level. Seventy-two percent of the respondents also thought that a bachelor's degree was necessary at the Assistant, Division or Deputy Chief level, while only 11% require it, and at the level of Chief of Department, 44 and 55% indicate that a bachelor's or master's degree is necessary while only 14 and 2% respectively, actually require these degrees at this position. The survey results can also be examined to compare the need for fire service executives to complete the Executive Fire Officer Program with those that require this education. At the Battalion Chief level, 14% believe EFO is necessary, but none require it. At the Assistant, Division, or Deputy Chief level, 39% believe EFO is necessary, but only three percent require it, and at the Chief of Department level, 59% believe EFO is necessary, but only four percent require this education.

4. What incentives are provided to encourage employees to improve their formal education?

Each department surveyed was asked if they provided any incentives as an enticement for individuals to improve their education. The majority of respondents indicated that they did provide such incentives. Table 5, Number of Departments Providing Incentives for Education illustrates these results.

Table 5.

---

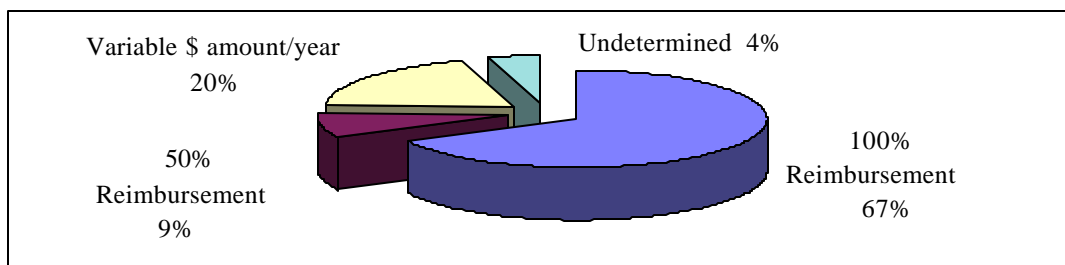
<u>Number of Departments Providing Incentives for Education</u>			
<u>Survey Question</u>	<u>Yes</u>	<u>No</u>	<u>% Yes</u>
5. Does your department provide incentives for personnel to obtain higher education?	62	9	87

---

Those departments that indicated that they provided incentives for their personnel to obtain higher education were also asked to indicate; a) if they provided tuition reimbursement, and if so, to what extent, b) if they provided pay increases commensurate with a college degree, and if so, to indicate the percent of pay increase for each potential degree, c) if they provided assistance and/or support with scheduling work time to accommodate class schedules, or d) other assistance.

Of the 62 departments that provide incentives, 46 indicated that they provided reimbursement for tuition. Slightly more than two-thirds of these departments provided 100% reimbursement, while less than one tenth reimbursed tuition up to 50%. Nearly one fifth of the departments provided tuition reimbursement of a variable dollar amount ranging from \$375 per class to \$1800 per year. Two departments indicated that they reimbursed their employees for tuition, but did not provide enough information to determine the type or amount of reimbursement. Figure 5, Amount of Tuition Reimbursement illustrates these responses.

Figure 5.

Amount of Tuition Reimbursement

Slightly less than half of the departments providing educational incentives gave pay increases commensurate with a college degree. These pay increases varied in percentage of base pay from two to ten percent. Some departments provided pay increases in a dollar amount per month rather than a percent of base pay. These dollar amounts per month varied from a low of \$20 to a high of \$300 per month. Table 6, Pay Incentives Commensurate with Degree illustrates the type of incentive provided (percent of pay, or variable dollar amount) the college degree these incentives are provided for, and the number of departments which pay these incentives.

Table 6.

Pay Incentives Commensurate with Degree

<u>Degree</u>	<u>Pay Incentive</u>			
	<u>&lt;5%</u>	<u>5-10%</u>	<u>Variable \$ amt.</u>	<u>Undetermined</u>
AA	11	7	7	3
BA	4	11	5	0
MA	0	1	2	0

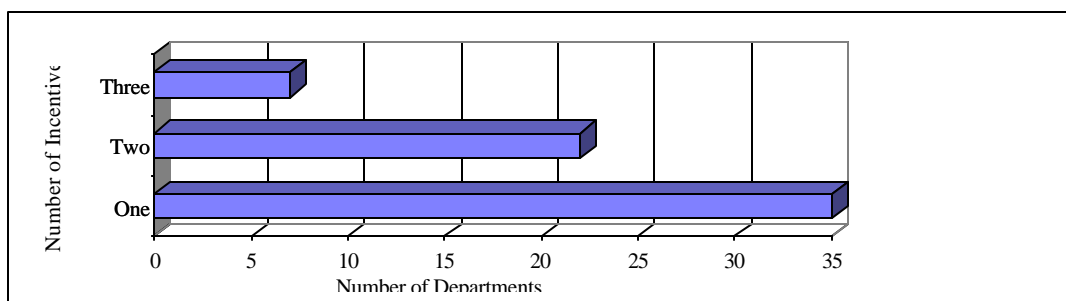
Seventeen of the departments providing educational incentives indicated that they provide

assistance or support of education efforts through scheduling work time to accommodate class schedules. One department provided college classes on-site to enable personnel to attend classes while on duty and one department provided classes on-line while on duty.

Slightly more than half of the departments that provided incentives did so in only one manner, i.e. tuition reimbursement alone, pay increase alone, etc. More than one third of the departments provided at least two incentives, i.e. tuition and pay increase, tuition and time off, etc., and more than one tenth of the departments provided three incentives, i.e. tuition, pay, and time off. Figure 6, Incentive Distribution illustrates the number of departments providing one, two, or three incentives.

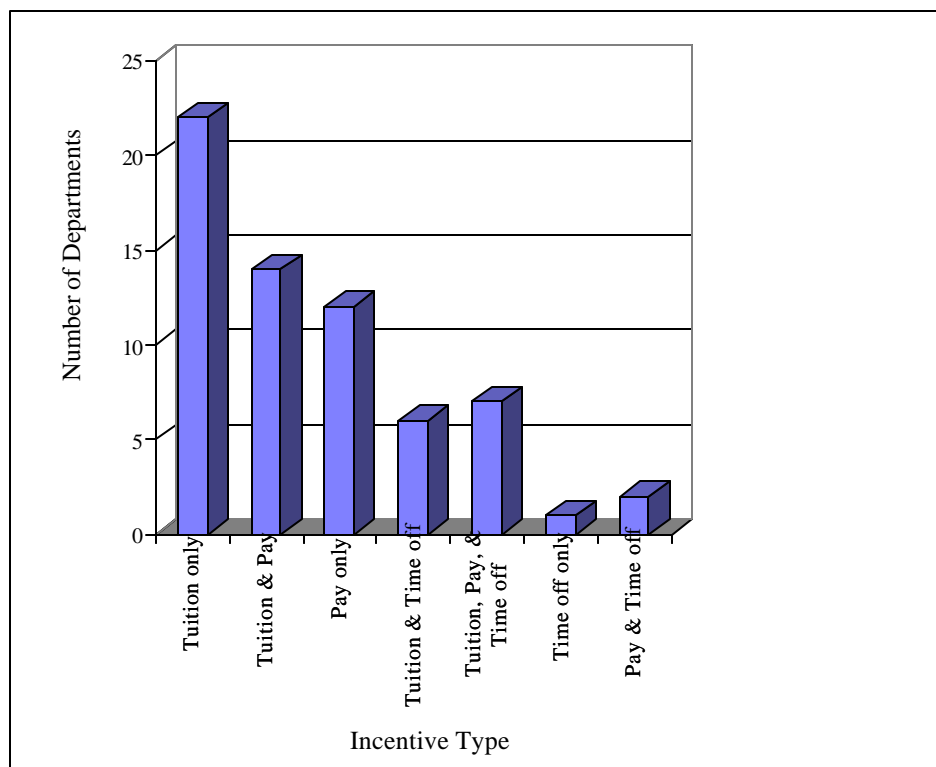
Figure 6.

Incentive Distribution



Of those departments that provided only one type of incentive, tuition reimbursement was cited most frequently, followed by increase in pay, and time off. Those departments that provided two incentives most frequently use tuition reimbursement and pay increases, followed by tuition and time off, and pay increase and time off. Figure 7, Incentive Combinations illustrates the various combinations of incentives.

Figure 7.

Incentive Combinations**DISCUSSION**

The need for higher education that will enable the fire service executive to be effective in a rapidly changing work environment is well documented in the literature. As the traditional roles and activities of the fire officer change, along with the varied organizations and individuals (both within and outside of the fire service) with whom these officers must interact, fire service leaders at all ranks must be better educated. This education will be necessary in order to both collaborate with and compete against those whose services or departments must struggle for the same public dollars.

The vast majority of respondents to the Education Survey indicated that they believed that higher education for fire service leaders is necessary. When asked to indicate what level of education they felt was most helpful at each of four ranks or positions within their departments, there became evident a progression of increasingly higher levels of education (from associate's to bachelor's and then master's

degree) the higher in rank or position one advanced. This approach of recommending progressively higher levels of education with increasingly higher ranks was also revealed in the literature. This same progression was also evident when respondents were asked to indicate the need for personnel at different ranks to complete the Executive Fire Officer Program (most commonly indicated at the two highest positions). The literature review did not expressly reveal this same trend, however.

There is evidence both in the literature review and in the responses to the surveys that much less education is actually required, both at the entry level and throughout the various promotional ranks. Previous research cited in the literature indicating departments that required either a college degree or some hours of college credit at the entry level ranged from 13 to 27%. It is interesting to note that 20% (the precise midpoint of the percentages cited in the literature) of the respondents to the survey used in this report indicated that they required some college education or a college degree for entry level positions. It seems little has changed in the last half decade with respect to entry level requirements.

When the literature and the results reported in this research is examined to compare what the fire service believes with what is actually practiced in promotional policies, a similar trend is revealed. More than 40% of the survey respondents indicated that they required some college education at various steps in their promotional processes. As noted above, progressively higher levels of education are required as one advances through the ranks from Company Officer to Chief of Department. When the educational requirements for each rank are examined separately it appears that the vast majority of departments (75% or more) do not require any college education, even at the level of Chief of Department. Many departments require degrees within only one or two particular ranks.

The use of tuition reimbursement and pay increases for college credit or degrees is cited in the literature as common types of incentives used in the fire service to encourage employees to further their education. This trend appears to be quite common as revealed by the survey responses as well. Fully 87% of the departments surveyed indicated that they provided incentives for education. It is also interesting to note that 45% of those surveyed indicated that they provided more than one incentive. Providing such inducements to encourage fire fighters and officers to obtain higher levels of education is an important step in ensuring that the fire service leaders of the future will have the additional knowledge

and skills that such an education provides.

It is quite apparent from the results of the survey instrument used in this report that higher education for fire service leaders, and even entry level personnel, is necessary. The practice of mandating college education, however, lags far behind. Few of the departments require more education at the entry level than might be obtained through classes taken for fire fighter or emergency medical technician certification. While this training may yield some college credit as a result of having taken this training through a junior college program, this is not guaranteed. In addition, even when college credit is earned through these programs, the total hours, or units achieved, will usually fall far short of those needed to receive an associate's degree.

The significant number of departments which encourage their employees to achieve higher levels of education through the provision of various incentives indicates the importance these departments place on this education. One could argue, however, that we haven't really "raised the bar" until we require higher levels of education at both the entry level and throughout the promotional ranks as well. Requiring an associate's or even a bachelor's degree at the entry level can be accomplished fairly easily as this may not require a change in a department's labor agreement with its employees. Resistance is perhaps more likely to come from Personnel Departments who may fear that their efforts to hire greater numbers of new fire fighters from among disadvantaged groups will be hampered by such a requirement. This requirement will not necessarily impede a department's ability to recruit and hire minority candidates if it can be shown that a much greater number of candidates in disadvantaged groups have begun to achieve higher levels of education.

Tying a fire service promotion to higher levels of education may be more difficult to achieve because such a change is quite often considered in the realm of a "bargainable", or "meet and confer" issue. However, if higher educational requirements can be achieved at the entry level, and if educational incentives can continue to be improved, this issue may become a moot point as most, if not all, candidates for these positions will already have the necessary degree before they take a promotional examination. In addition, some of the highest ranks within the fire service are considered management, and not union positions. As a result, many communities may be able to raise the educational



requirements in these positions without a negotiated settlement. Those who would aspire to these ranks would then be compelled to get the necessary education to ensure their eligibility.

By following many of the improvements in incentives cited throughout this report, particularly those that provide increases in pay for progressively higher levels of college education, the Clovis Fire Department could see many more of its personnel obtain college degrees. Current incentives which place a greater emphasis on obtaining college credit in fire science, rather than a college degree in general, makes it difficult to ensure that our personnel will continue with their education, especially if they do not aspire to the highest ranks within the department. In addition, raising the educational requirements for new employees would also contribute to a greater number of college educated personnel as the department grows.

There is little doubt that the fire service, and the mission it serves, is changing. There is also little doubt that greater levels of education are necessary to cope with and manage these changes. Can we imagine a time when the minimum requirements for a new fire fighter will include a bachelor's degree from an accredited college or university? Do fire service leaders today, and those in the future need education such as this? If the answer to the latter question is yes, then perhaps we should work harder now to be certain that a "yes" answer to the former question becomes the reality in the future.

## **RECOMMENDATIONS**

The information revealed in this report can provide fire departments with information to compare efforts for ensuring that their future fire service leaders within their organizations will have the education necessary to meet new challenges, with the same efforts of other departments. Great strides have been made by many fire departments in encouraging personnel to achieve higher levels of education. There are several steps, however, which departments could take to improve the numbers of personnel who become college educated, and to enhance the educational levels of those who already possess degrees.

1. Increase the minimum educational requirements necessary for employment at the entry level. At a minimum, an associate's degree should be mandated.
2. Require a minimum of a bachelor's degree for promotion to Company Officer.

3. Require Chief Officers to obtain either a master's degree, or complete the Executive Fire Officer Program at the National Fire Academy, or both. This requirement could be imposed as a condition of employment at these ranks with completion of either educational requirement within a reasonable time frame after promotion.
4. Improve educational incentive programs to include graduated increases in pay for the most common college degrees of associate's, bachelor's, and master's. Incentives paid for college degrees should not be dependent on a particular academic discipline, particularly above the level of an associate's degree.

Several research projects cited in this report included studies of educational requirements for positions from entry level to Chief of Department. These studies however, were either quite narrow in the scope of departments examined or in the geographic area surveyed. Additional research of a broader scope should be conducted to determine if the information shown here is replicated in other areas of the country and in different sized departments.

There are several additional areas related to higher education in the fire service not thoroughly examined in this report which require further study as well. Additional research should be conducted to determine if the imposition of college education requirements for entry level positions will impede a department's ability to hire individuals from disadvantaged groups. A study of this type was the foundation for research conducted by C.R. Bennett of Aurora, Colorado, cited in the literature review of this report. An analysis which examines the educational requirements and incentives for police officers in comparison with fire fighters in similar sized communities may provide additional information useful in making a stronger case for improvements in these areas in the fire service.

If leaders in the fire service are to remain professionally competitive with their peers in other government agencies they must be better educated. Imposing higher education requirements on an unwilling or unmotivated workforce is likely to meet with significant resistance, and may ultimately end in failure. However, by gradually and incrementally increasing college educational requirements at the entry level and above, while at the same time improving financial incentives which encourage and reward

employees who achieve these degrees, the fire service will eventually be able to build a workforce of highly educated leaders.

## REFERENCES

- Albert, L., (1997). Is formal education a requirement for promotions in central Illinois fire departments? (EFOP, Executive Leadership). *National Fire Academy*. Emmitsburg, MD. 2.
- Bennett, C., (1994, February). Effects of a college requirement on employee diversity. (EFOP, Executive Development). *National Fire Academy*. Emmitsburg, MD. 2-10.
- Brame, K., Lewis, N., et al (1990, May). Academic achievement levels for fire chiefs. *Fire Chief*, 62-65.
- Clark, B., (1993, September). Higher education and fire service professionalism. *Fire Chief*. 50.
- City of Clovis (1997). Professional development program. *Memorandum of Understanding between The City of Clovis and Clovis Firefighters Association*. Clovis, CA. 12.
- City of Clovis (1998). Personnel standards - time in grade. *Clovis Fire Department Manual of Operations: Book 1, Policy*. Clovis, CA. 1-6-8.2.
- Crapo, W. (1998, July). Time for a change. *Fire Engineering*, 56.
- Geiger, C. (1997, March). Cultivating the next generation of fire officers. *American Fire Journal*, 30.
- Hammer, M. (1996). *Beyond Reengineering*. New York: Harper Collins.
- Harper, B., (1997). The community college role in fire service education. (EFOP, Executive Leadership). *National Fire Academy*. Emmitsburg, MD. 5-10.
- Hartsfield, F., (1993). The relationship of higher education and educational requirements to fire service leadership. (EFOP, Executive Leadership). *National Fire Academy*. Emmitsburg, MD.
- Hewitt, W. (1995). *Recreating the Fire Service*. Ottawa, Ontario: Kendall Publications.
- Hollas, R., (1994). College education: a requirement for promotion? (EFOP, Executive Development). *National Fire Academy*. Emmitsburg, MD. 6, 10.
- International Association of Fire Chiefs Foundation. (1996, October). *Wingspread IV: Statements of critical issues to the Fire and Emergency services of the United States*. Dothan, AL. 10.

Kramer, W., (1995). Training and education. In J. Batchler, and T. Brennan, (Eds.). *The Fire Chief's Handbook*. (5th. ed.). (pp. 326-351). Saddlebrook, NJ: PennWell.

Latin, O., (1992). Command staff executives need a college degree. (EFOP, Executive Development). *National Fire Academy*. Emmitsburg, MD. 2-13.

National Fire Academy (1996). Managing change. In, *Excutive Leadership Course*.(pp11-3, 4). Emmitsburg, MD: Federal Emergency Management Agency.

Paulsgrove, R. (1997). Fire department administration and operations. In (Ed.), *Fire Protection Handbook* (17th ed., pp. 10-21). Quincy, MA: National Fire Protection Association.

Smoke, C. (1997, December). Career development for company officers. *The Voice*, 8.

Smoke, C. (1998, January). Career development for company officers, part 2. *The Voice*, 16.

Ward, M. (1998, January). Coping with generation Y. *Fire Chief*, 32.

Whisler, D. (1994). Officer development program: preparing potential officers for success. (EFOP, Executive Development). *National Fire Academy*. Emmitsburg, MD. 8-20, .

## **APPENDIX**

### Fire Service Leadership Education Survey

## FIRE SERVICE LEADERSHIP EDUCATION SURVEY

Department name: \_\_\_\_\_ Total personnel: \_\_\_\_\_

Number of Company Officers: \_\_\_\_ Number of Chief Officers: \_\_\_\_\_

1. Do you believe that higher education (college) is necessary for Company Officers and above?

\_\_ yes \_\_\_\_\_ no

2. If you answered yes to question #1, please indicate the level of higher education that you feel is necessary for the position indicated: (circle all that apply)

Company Officer: AA/AS BA/BS MA/MS EFO

Battalion Chief: AA/AS BA/BS MA/MS EFO

Deputy/Division/Assistant Chief: AA/AS BA/BS MA/MS EFO

Chief of Department: AA/AS BA/BS MA/MS EFO

(Key: Associates, Bachelors, or Masters Degree , Executive Fire Officer)

AA/AS, BA/BS, MA/MS, EFO

3. Is some college education required for entry level positions within your department?

\_\_\_\_\_ yes \_\_\_\_\_ no If yes, please list the number of hours or degree.

\_\_\_\_\_ hours \_\_\_\_\_ degree

4. Is a college degree required for promotion?

\_\_ yes \_\_\_\_\_ no If yes, please circle the college degree and rank/position.

Associates Bachelors Masters EFO /degree for: \_\_\_\_\_

Associates Bachelors Masters EFO /degree for: \_\_\_\_\_

Associates Bachelors Masters EFO /degree for: \_\_\_\_\_

5. Does your department provide incentives for personnel to obtain higher education?

\_\_ yes \_\_\_\_\_ no

(please continue on the other side)

6. If you answered yes to question #5, please indicate the type of incentive:

☐ tuition reimbursement, list % of reimbursement, etc. \_\_\_\_\_

☐ pay increase commensurate with degree, please indicate the pay incentive for obtaining the educational degree listed.

Associates Degree \_\_\_\_\_

Bachelors Degree \_\_\_\_\_

Masters Degree \_\_\_\_\_

Executive Fire Officer \_\_\_\_\_

☐ assistance/support with scheduling work time to accommodate class schedules

☐ other, please list \_\_\_\_\_

7. Do you have personnel currently enrolled or graduated from the National Fire Academy's Executive Fire Officer Program?

☐ yes ☐ no

If yes, please indicate the number of personnel:

☐ enrolled ☐ graduated

8. Do any positions within your department require graduation from the National Fire Academy's Executive Fire Officer Program?

☐ yes ☐ no

If yes, please indicate the position: \_\_\_\_\_

**Thank you very much!**

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

☐ Yes, please send me the results of the survey.

Name: \_\_\_\_\_

Address: \_\_\_\_\_